

**BY ORDER OF THE
SECRETARY OF THE AIR FORCE**

**AIR FORCE MANUAL 11-2B-1
VOLUME 2**



27 JANUARY 2021

Flying Operations

***B-1 AIRCREW EVALUATION
CRITERIA***

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RELEASABILITY: There are no releasability restrictions on this publication.

OPR: AFGSC/A3TV

Certified by: AF/A3T
(Maj Gen James A. Jacobson)

Supersedes: AFMAN11-2B-1V2,
15 February 2019

Pages: 44

This manual implements Air Force (AF) Policy Directive (AFPD) 11-2, *Aircrew Operations*; and AFPD 11-4, *Aviation Service*. It applies to all B-1 units. This publication applies all civilian employees and uniformed members of the regular Air Force and the Air Force Reserve. It does not apply to the Air National Guard. This manual requires the collection and/or maintenance of information protected by the Privacy Act of 1974 authorized by Department of Defense Directive (DoDD) 5400.11, *DoD Privacy Program*. The applicable System of Records Notice(s) [number and title] is (are) available at: <http://dpclo.defense.gov/Privacy/SORNs.aspx>. Ensure that all records created because of processes prescribed in this publication are maintained in accordance with Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and disposed of in accordance with the Air Force records disposition schedule, which is located in the Air Force records information management system. Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. AF Forms 847 should be routed through the major command (MAJCOM) standardization and evaluation office for approval prior to forwarding to the OPR. Parent command standardization and evaluation will forward approved recommendations to the lead command OPR (headquarters (HQ) Air Force Global Strike Command (AFGSC)/A3TV, 245 Davis Avenue East, Barksdale AFB LA, 71110). This publication may be supplemented at any level, but all supplements must be routed to the OPR of this publication for coordination prior to certification and approval. The authorities to waive wing/unit level requirements in this publication are identified with a Tier (T-0, T-1, T-2 or T-3) number following the compliance statement. See Department of the Air

Force Instruction (DAFI) 33-360 for a description of the authorities associated with the Tier numbers and reference **paragraph 1.3** of this manual for specific waiver guidance. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force. Compliance with the attachments in this publication is mandatory.

SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed. Major changes include: Clarification to waiver authorities, tiered waiver authorities were updated throughout the document. Removed low altitude requirements for operational and training units from all chapters in accordance with 8 Air Force Commander (8 AF/CC) and Air Force Global Strike Command Commander (AFGSC/CC) guidance, incorporating HQ AFGSC flight crew information file BB20-01 B-1B LOWAT Restriction. Reorganized **Chapter 1** and expanded on emergency procedures evaluation (EPE) guidance and weapon systems officer (WSO) evaluations conducted in the weapons system trainer (WST). **Chapter 2** publication requirements were added and updated. Air refueling requirements were changed and updated. Emergency traffic pattern requirements were changed. Aircraft commander evaluation requirements were added. **Table 2.1** and **Table 2.2** were completely reorganized and renumbered, new requirements were added including landing from an instrument approach, holding and circling/sidestep approach to meet Federal Aviation Administration (FAA) requirements, and numerous evaluation areas were consolidated. New notes were added for initial evaluation requirements, emergency pattern requirements and test unit requirements. **Table 2.2** was also broken up into associated evaluation types to align with AFI 11-202V2 guidance. **Chapter 3** was updated to align with **Table 2.1** and scrubbed for accuracy and currency. **Chapter 4** was updated to align with **Table 2.2** and scrubbed for accuracy and currency.

Chapter 1—GENERAL INFORMATION	4
1.1. Purpose.	4
1.2. Roles and Responsibilities.	4
1.3. Waivers.	4
1.4. Procedures.....	4
1.5. Grading Instructions.	5
Table 1.1. General Criteria.....	6
1.6. Emergency Procedures Evaluation (EPE).....	6
1.7. Documentation of Weapons Employment Results.	6
Table 1.2. Example Weapons Employment Grades.	6
1.8. Mission Description.	7

AFMAN11-2B-1V2 27 JANUARY 2021	3
1.9. Examinations.	7
1.10. Instructor (INSTR) Evaluations.	8
Chapter 2—EVALUATION REQUIREMENTS	9
2.1. General.	9
2.2. INSTM/QUAL Evaluations.	9
2.3. MSN Evaluation.	10
2.4. INSTR Evaluations.	10
2.5. AC Evaluations.	11
Table 2.1. Evaluation Events.	11
Table 2.2. EPE Events.	13
Chapter 3—EVALUATION CRITERIA	15
3.1. General Grading Standards.	15
3.2. General.	15
3.3. Instrument.	28
3.4. Tactical Employment.	31
Chapter 4—EMERGENCY PROCEDURES EVALUATION CRITERIA	38
4.1. General Grading Standards.	38
4.2. General.	38
4.3. Critical Action Procedures.	39
4.4. Aircraft Malfunctions.	39
4.5. Instrument Procedures.	39
Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION	40

Chapter 1

GENERAL INFORMATION

1.1. Purpose. This manual establishes guidance and procedures for conducting B-1 aircrew evaluations. Conduct all evaluations in accordance with AFI 11-202V2, *Aircrew Standardization and Evaluation Program*, AFI 11-202V2_AFGSCSUP, and this manual. **(T-2).**

1.2. Roles and Responsibilities. All roles and responsibilities will be followed in accordance with AFI 11-202V2 and AFI 11-202V2, AFGSCSUP. HQ AFGSC/A3TV is the OPR for this instruction and sets guidance.

1.2.1. Air Force Global Strike Command Directorate of Operations and Communications (AFGSC/A3/6). AFGSC/A3/6 is responsible for establishing and managing the AFGSC standardization and evaluation program, in accordance with AFI 11-202V2.

1.2.2. Operations Group Commander. The operations group commander is responsible for establishing and maintaining the unit-level standardization and evaluation program and ensuring flight examiners administer evaluations in accordance with AFI 11-202V2 and this publication.

1.2.3. Flight examiners (FEs) are responsible for administering standardization and evaluation programs in accordance with AFI 11-202V2 and this publication.

1.3. Waivers. Forward T-0, T-1, and T-2 waiver requests to the AFGSC/A3/6 or Air Force Reserve Command Director of Combat Operations (AFRC/A3D) for coordination with HAF or external agencies for approval. Waivers are valid for one year from the approval date. In accordance with DAFI 33-360, T-3 waiver authority may be delegated to the group commander or equivalent. Information copies will be provided to AFGSC Director of Training, Test, and Standardization/Evaluation (A3T) and AFRC/A3D. **(T-2).**

1.4. Procedures.

1.4.1. The Flight Examiner (FE) will brief the examinee on the purpose of the evaluation and how it will be conducted prior to the sortie. **(T-2).** The examinee will accomplish required flight planning in accordance with the flight position during the evaluation. **(T-2).** FEs will assist in mission planning and briefing as tasked, and will be furnished a copy of necessary mission data and mission materials. **(T-2).**

1.4.2. Unless specified, examinees may fly in any flight position to best enable the FE to conduct a thorough evaluation. At the FE's discretion, WSOs may be evaluated on defensive systems officer (DSO) responsibilities while occupying in the offensive systems officer (OSO) position.

1.4.3. If an actual emergency occurs, at a minimum, the initial reaction should be evaluated. The FE should use discretion to determine when to suspend or terminate an evaluation. The FE may, at his or her discretion, choose to continue the evaluation. If the evaluation is continued, the evaluator will explicitly inform the crew. **(T-2).**

1.4.4. FEs should use all authorized recording devices and debriefing tools to reconstruct and evaluate the mission. When used, these recordings will be managed as official electronic

records in accordance with AFI 33-322 and disposed of only in accordance with the Air Force records disposition schedule.

1.4.5. The FE will thoroughly critique all aspects of the flight in addition to reviewing the examinee's overall rating, specific deviations, assigned area grades (if other than qualified), and assigning any required additional training. **(T-2).**

1.4.6. Required areas are shown in **Table 2.1** All required areas must be attempted or accomplished in-flight in accordance with **Chapter 2** and **Table 2.1** If it is determined that a required area cannot be evaluated in-flight, the squadron commander may approve an alternate method of evaluation. FEs will document areas not evaluated in-flight, the alternate methods used, and justification in the "additional comments" portion of the AF Form 8, *Certificate of Aircrew Qualification*. **(T-2).** A required item may only be completed using the WST if that specific item is included on the B-1 simulator certification letter and certified to the appropriate level. **(T-2).**

1.4.6.1. WSO Qualification (QUAL)/mission (MSN) evaluations may be conducted entirely in the WST, with the exceptions of initial instructor (INIT INSTR) and requalification instructor (RQ INSTR) evaluations. **(T-3).** WSO evaluations conducted entirely in the WST will have a full B-1 crew and will be integrated. **(T-2).**

1.4.6.2. Instrument (INSTM)/QUAL/MSN evaluation events accomplished in the WST will not be accomplished during an EPE. **(T-2)**

1.4.6.2.1. INSTM/QUAL/MSN evaluation events may be accomplished during the same WST mission, provided the EPE events are continuous and uninterrupted from start to finish. **(T-2).**

1.4.6.2.2. WSO QUAL/MSN evaluations conducted entirely in the WST will not be accomplished during an EPE WST mission. **(T-2).**

1.5. Grading Instructions. Standards and performance parameters are contained in AFI 11-202V2 and this manual.

1.5.1. FEs should compare examinee performance for each area accomplished during the evaluation to the standards contained in AFI 11-202V2 and this manual before assigning an appropriate grade. Exercise judgment for subjective areas and specific situations not covered.

1.5.2. Tolerances for in-flight parameters should be based on conditions of smooth air and a stable aircraft. Do not consider momentary deviations from tolerances, provided the examinee applies prompt corrective action and such deviations do not jeopardize safety. The FE should consider cumulative deviations, compare to area grading criteria, and apply judgment when determining overall grades.

1.5.3. FE judgment is the determining factor in arriving at the overall grade.

1.5.4. General Criteria. Criteria in **Table 1.1** apply during all phases of flight except as noted for specific events and instrument final approaches:

Table 1.1. General Criteria.

Q	Altitude	± 200 feet
	Airspeed/Mach	± 5%
	Navigation	± 3 nautical mile (NM)
	Tactical Air Navigation (TACAN) Arc	± 2 NM
Q-	Altitude	± 300 feet
	Airspeed/Mach	± 10%
	Navigation	± 5 NM
	TACAN Arc	± 3 NM
U	Exceeds Q- tolerances	

1.6. Emergency Procedures Evaluation (EPE). EPEs will be executed and documented in accordance with AFI 11-202V2. Required evaluation areas are shown in **Table 2.2** Conduct EPEs in the WST. If the WST is unavailable, the EPE may be accomplished via an alternate method and should be documented in accordance with **paragraph 1.4.6** EPEs are commensurate with the examinee's mission status (combat mission ready, basic mission capable, or mission ready). Airspeed and altitude tolerances are increased 50% for evaluations conducted in the WST.

1.6.1. FEs will evaluate crewmembers of like specialty with the exception of SPOT objectivity evaluations. **(T-2)**. For a definition, see the term “SPOT” in the “terms” section of **Attachment 1**.

1.6.2. FEs will administer EPEs in the WST as integrated crews. Any EPE conducted in using independent mode will be annotated in the “additional comments” section of the AF Form 8. **(T-3)**. In no case will two consecutive EPEs be conducted using independent mode.

1.7. Documentation of Weapons Employment Results. Document weapons employment results in the “mission description” section of the AF Form 8. The abbreviations used to document weapons scores are in accordance with Air Force manual (AFMAN) 11-2B-1V1, *B-1 Aircrew Training*, or current Ready Aircrew Program tasking message.

1.7.1. Air-to-Surface. Record delivery type and weapons grades for each air-to-surface delivery. Weapons delivery hit criteria for MSN evaluations is in accordance with AFMAN 11-2B-1V1. On ranges where precise scoring is not available or for simulated deliveries, FEs may assess weapons employment results based on executed procedures. Document results using "Hit/Miss" as in **Table 1.2** Impacts exceeding AFMAN 11-2B-1V1 hit criteria will be documented as a "Miss." **(T-2)**. Within **Table 1.2** of the Patriot Excalibur-generated AF Form 8, the verbiage “FE Assessed” will be used if no precise scoring is available. **(T-3)**.

Table 1.2. Example Weapons Employment Grades.

Weapons employment grades were:			
Medium Altitude System Delivery	Guided Delivery	Degraded Delivery	Standoff Delivery
*Miss	*Hit	Miss	*Miss
*Flight Examiner Assessed			

1.7.2. FE Judgment. FEs should apply judgment when determining the weapons employment grade. FEs should not consider WSO performance as less-than-qualified based solely on unreliable or substandard scores. FEs may override substandard weapons scores when weapon delivery procedures are executed satisfactorily. Conversely, if the evaluatee uses marginal or unacceptable procedures, the FE should grade accordingly regardless of scores. The FE will include justification for this situation in the “additional comments” section of the AF Form 8. **(T-3)**.

1.8. Mission Description. Document a description of the mission executed in the “mission description” section of the AF Form 8 for all evaluations using the following methodology. Ensure the mission description details the overall flow and content of the evaluation to include:

1.8.1. Formation (and flight position) or single ship. **(T-3)**.

1.8.2. Day or night. **(T-3)**.

1.8.3. Location of training military operations area, special use airspace (or other utilized airspace or route). **(T-3)**.

1.8.4. Intel threat scenario. **(T-3)**.

1.8.5. Instructional topics covered (if required). **(T-3)**.

1.8.6. Any required items that were not accomplished with a reason for non-accomplishment. **(T-2)**.

1.8.7. Example: *“The evaluation was planned, briefed, and flown as formation lead of a daytime, two-ship sortie to the Powder River Training Complex against a USINDOPACOM threat scenario. Instruction was evaluated throughout the flight and included air refueling and threat reactions. The evaluation was flown in accordance with AFMAN 11-2B-1V2. Precision and non-precision approach requirements were not accomplished due to an aircraft emergency. The mission concluded with a thorough debrief.”*

1.9. Examinations.

1.9.1. Emergency Procedures Examination (Closed Book).

1.9.1.1. General Knowledge. This exam will consist of a minimum of 20 questions and include information applicable to the individual's crew position and the unit's mission. **(T-2)**. Units may increase the number of questions to provide an in-depth evaluation of the examinee's knowledge.

1.9.1.2. Boldface. This exam will consist of written recitation of each boldface procedure applicable to the individual's specialty in accordance with Technical Order (T.O.) 1B-1B-1, *Flight Manual USAF Series B-1 Aircraft*. **(T-2)**. Each answer must contain all critical action items in proper sequence. **(T-2)**. Verbatim responses are not required; however, answers must clearly state the intended course of action. **(T-2)**.

1.9.2. Qualification Examination (Open Book). This examination will be derived from all applicable B-1 T.O.s, Air Force Tactics, Techniques and Procedures (AFTTPs), AFMAN 11-202V3, *Flight Operations*, AFI 11-214, *Air Operations Rules and Procedures*, and AFMAN 11-2B-1V3, *B-1 Operations Procedures*. **(T-2)**. The exam will consist of at least 50 questions; however, units may increase the number of questions to provide an in-depth

evaluation of the examinee's knowledge. (T-2). WSO exams will consist of questions applicable to both OSO and DSO positions. (T-2).

1.10. Instructor (INSTR) Evaluations. Any instructor receiving an area grade of “Q-” with additional training, or “U” in any grading area during any evaluation will not perform instructor duties in that area until additional training is complete . (T-2). The FE will check the “restrictions” block and annotate the restriction on the back of the AF Form 8 . (T-2).

Chapter 2

EVALUATION REQUIREMENTS

2.1. General. Evaluation events are listed in [Table 2.1](#) and [Table 2.2](#). All areas marked “required”(“R” in the applicable column) are required and must be accomplished. **(T-3)**. Examinees will only be evaluated on those areas for which they are qualified. **(T-2)**. Include restrictions on the AF Form 8 if any required area is not accomplished. **(T-2)**.

2.1.1. Mission Data. If using pre-planned products, the individual being evaluated is responsible for ensuring the data briefed and used on the mission is accurate and effective for mission accomplishment.

2.1.2. Currency of Flight Publications. The minimum required aircrew publications will be in accordance with AFI 11-202V2_AFGSCSUP. During all evaluations, FEs will evaluate required technical orders and in-flight publications for currency and accuracy in accordance with AFI 11-202V2, AFI 11-215, *Flight Manuals Program* and AFGSCI 11-270, *Electronic Flight Bag Operations*. Units may specify additional publications to be evaluated in the unit supplement to AFI 11-202V2. When unit-maintained publications are used in-flight, the examinee will ensure currency and suitability for flight. **(T-2)**. The Minimum required in-flight aircrew publications are:

2.1.2.1. T.O. 1B-1B-1CL-1, *Pilot’s Flight Crew Checklist*

2.1.2.2. T.O. 1B-1B-1-1CL-1, *Flight Manual Supplement Checklist (Performance)*

2.1.2.3. T.O. 1B-1B-1-2CL-1, *Weapon Systems Officer’s Abbreviated Flight Crew Checklist*

2.1.2.4. T.O. 1B-1B-34-2-1CL-1, *Aircrew Weapons Delivery Checklist (Nonnuclear)*

2.1.3. Combined Evaluations. Normally, the INSTM, QUAL, and MSN evaluations should be combined into a single evaluation in accordance with AFI 11-202V2. However, each evaluation type may be administered on any compatible training mission with the squadron commander's concurrence. Combined evaluations must fulfill all current INSTM, QUAL and MSN evaluation requirements, including ground phase requisites. **(T-2)**. For combined evaluations, one EPE may be accomplished that includes all EPE requirements. All evaluations should be scheduled to include all required events on a single sortie.

2.2. INSTM/QUAL Evaluations. The completion requirements for INSTM and QUAL evaluations are delineated in [Table 2.1](#) with specific area evaluation criteria in [Chapter 3](#).

2.2.1. The INSTM evaluation requirements are derived from the FAA instrument practical test FAA-S-ACS-8B, *Instrument Rating-Airplane Airmen Certification Standards*. This evaluation ensures operations comply with National Airspace System rules and procedures in accordance with AFI 11-202V2.

2.2.2. Emergency Traffic Patterns/Approaches/Landings. Co-pilots must accomplish a No Flap/Slat Touch and Go landing. **(T-3)**. Instructor pilots (IPs) and aircraft commanders (ACs) may accomplish a No Flap/Slat Touch and Go landing, simulated single engine out touch and go landing, or simulated single engine out full stop landing. **(T-3)**.

2.3. MSN Evaluation. The completion requirements for MSN evaluations are delineated in [Table 2.1](#) with specific area evaluation criteria in [Chapter 3](#). FEs will evaluate examinees at their highest qualification level. **(T-3)**. Evaluations during exercises or deployments, where permitted, are encouraged. Basic mission capable or mission ready pilots and WSOs should only be evaluated on those missions they routinely perform.

2.3.1. Evaluation Profiles. Mission evaluations should reflect designed operational capability tasking scenarios and demonstrate the individual's ability to accomplish combat taskings to include special missions. Units should attempt to schedule actual weapon releases and formations for MSN evaluations.

2.3.2. Weapons Employment. Any bomb run, actual or simulated, satisfies this requirement. All planned and attempted releases will be evaluated. **(T-3)**. Degraded delivery procedures can meet the requirements of the evaluation.

2.3.3. Electronic Warfare Mission Evaluation Requirements. Squadrons will schedule at least one defensive action electronic attack event. **(T-2)**. The run should be scheduled against a Multiple Threat Emissions Systems site, simulators, emulators, or actual electronic attack assets. Threat scenarios should represent current unit taskings. If the scheduled activity is attempted and not flown to completion due to circumstances beyond the aircrew's control, the requirements of this paragraph may be satisfied by accomplishing any portion of an electronic attack run if the FE observes sufficient activity was completed.

2.3.4. Air Refueling (AR). AR should be scheduled on all MSN evaluations for qualified pilots. For all recurring evaluations for experienced ACs or IPs: If scheduled AR activity is lost, AR may be completed via an alternate method, at squadron commander discretion, provided it was evaluated in-flight to a "Q" level during the previous evaluation. In this case, it will be documented in the "additional comments" section of the AF Form 8. **(T-2)**. AR must be evaluated in-flight to complete initial AC (INIT AC), INIT INSTR and RQ evaluations for qualified pilots. **(T-2)**. Initial AR qualification may be accomplished as a SPOT evaluation prior to the INIT AC evaluation, provided AR training is completed in accordance with AFMAN 11-2B-1V1.

2.3.5. Terrain Following (TF). In accordance with AFMAN 11-2B-1V1 and AFMAN 11-2B-1V3, only 337 Test and Evaluation Squadron aircrew using test coded aircraft are authorized to perform TF flight operations. TF requires a 10-minute low-level navigation segment and one fly-up. If TF is less than 10 minutes, completion is at FE discretion. **(T-2)**.

2.4. INSTR Evaluations. Evaluations will include thorough evaluation of the examinee's instructor knowledge and ability. **(T-2)**. Examinees are required to demonstrate instructor ability on all evaluations and will conduct a student critique following the crew debrief. **(T-3)**. INIT and RQ INSTR evaluations should be accomplished in conjunction with combined evaluations.

2.4.1. INIT and RQ INSTR evaluations that are not combined with INSTM/QUAL/MSN evaluations will be accomplished as INIT or RQ INSTR evaluations representative of the unit's mission and include the minimum required items listed in [Table 2.1](#) **(T-2)**. INIT and RQ evaluations must be accomplished in-flight. **(T-2)**.

2.4.2. For scheduled instructor evaluations, the evaluator may require the examinee to present verbal explanations of equipment operations and procedures pertinent to crew duties

and responsibilities. Special demonstrations or instruction requested by the evaluator should not interfere with normal mission accomplishment. Evaluators should provide sufficient time for the instructor to prepare for critiques.

2.4.3. WSOs must demonstrate instructor abilities in both the OSO and DSO positions on all WSO INSTR evaluations. (T-2).

2.5. AC Evaluations.

2.5.1. Initial evaluations that are not combined with INSTM/QUAL/MSN evaluations will be accomplished as SPOT evaluations representative of the unit's mission and include the minimum required items listed in **Table 2.1 (T-2)**. Initial evaluations must be accomplished in-flight. (T-2). Annotate "INIT AC" in the "comments" section of the AF Form 8. (T-2).

2.5.2. During initial evaluations, the emergency approach and landing event will be accomplished as a simulated single engine out touch and go landing, or simulated single engine out full stop landing. (T-2).

2.5.3. Evaluations of AC qualification will be conducted during all subsequent periodic evaluations. (T-2).

Table 2.1. Evaluation Events.

1 – Pilot INSTM Evaluation			4 – WSO QUAL Evaluation				
2 – Pilot QUAL Evaluation			5 – WSO MSN Evaluation				
3 – Pilot MSN Evaluation							
Area	Notes:	Area Title	1	2	3	4	5
GENERAL							
1	4, 5	MISSION PLANNING	R	R	R	R	R
2	4, 5, 6, 7	BRIEFING (if applicable)		R	R		R
3		PRE-TAKEOFF	R	R	R	R	R
4		TAKEOFF	R	R			
5		DEPARTURE	R	R		R	
6		LEVEL OFF	R	R			
7		ENROUTE NAVIGATION	R	R		R	
8	7	FORMATION OPERATIONS					
9		SYSTEM CHECKS	R	R		R	
10		FUEL MANAGEMENT	R	R	R		
11		SENSOR OPERATIONS			R	R	R
12		EQUIPMENT OPERATIONS		R	R	R	R
13		COMMUNICATIONS/TRANSPONDER USE	R	R	R	R	R
14		CREW RESOURCE MANAGEMENT	R	R	R	R	R
15	2, 3, 4, 5	AIR REFUELING (if applicable)			R		
16		DESCENT		R		R	
17		GO AROUND					
18		EMERGENCY TRAFFIC PATTERN		R			
19	2, 4, 9,	EMERGENCY APPROACH AND LANDING	R	R			
20	1, 2	VISUAL PATTERN/APPROACH		R			
21	2, 9, 11	NORMAL LANDING	R	R			

Notes:

5. Required for INIT/RQ INSTR. (T-2).
6. Required for AC/single-ship mission lead (SML)-qualified pilots and SML-certified WSOs. This does not preclude ACs and SML WSOs from being evaluated on the same aircraft.
7. Required for flight lead (FL)-certified pilots and multi-ship mission lead-certified WSOs, if practical. This does not preclude flight and multi-ship mission leads from being evaluated on the same aircraft.
8. Only applies to the 337th Test and Evaluation Squadron.
9. May be dual logged with Area 40: Landing from an Instrument Approach.
10. May be dual logged with Area 19: Emergency Approach/Landing or Area 21: Normal Landing.
11. May be executed as a touch-and-go landing.

Table 2.2. EPE Events.

1 – Pilot QUAL EPE		3 – WSO QUAL EPE				
2 – Pilot MSN EPE		4 – WSO MSN EPE				
Area	Notes	Area Title	1	2	3	4
GENERAL						
201		KNOWLEDGE	R	R	R	R
202		UNUSUAL ATTITUDE RECOVERIES	R		R	
203		CREW COORDINATION/CHECKLIST USAGE	R	R	R	R
204	*	AIRMANSHIP	R	R	R	R
205	*	SAFETY	R	R	R	R
206	*	AIRCREW DISCIPLINE	R	R	R	R
CRITICAL ACTION PROCEDURES						
207	*	AUXILIARY POWER UNIT FIRE	R			
208	*	ABORT	R			
209	*	ENGINE/NACELLE FIRE	R			
210	*	CONTROL STICK LOCKUP	R			
211	*	STALL PREVENTION/RECOVERY	R			
212	*	OVER WING FAIRING FIRE	R			
213	*	BRAKE FAILURE	R			
214	*	UNCONTROLLED EJECTION	R		R	
AIRCRAFT MALFUNCTIONS						
215		PRE-TAKEOFF				
216		TAKEOFF				
217		CRUISE/ENROUTE				
218		WEAPON DELIVERY MALFUCTIONS				R
219		OFFENSIVE/DEFENSIVE AVIONICS ABNORMAL PROCEDURES			R	R
220	1	TF MALFUNCTION PROCEDURES (if applicable)	R	R	R	R
221		APPROACH				
222		LANDING				
223		OTHER				
INSTRUMENT PROCEDURES						

224		AFMAN 11-202V3 PROCEDURES				
225	2	HOLDING	R			
226	2	CIRCLING/SIDE-STEP APPROACH	R			
227		STANDBY INSTRUMENT USE				
228		ALTERNATE/DIVERT FIELD PROCEDURES				
229		LOCAL AREA PROCEDURES				

Notes:

* Indicates a critical area.

1. Only applies to the 337th Test and Evaluation Squadron.
2. Required on Pilot EPEs associated with Pilot INSTM Evaluations. **(T-2)**. This requirement may be accomplished in-flight during INSTM evaluations in lieu of an EPE event. EPE requirements accomplished in-flight will be annotated in the “comments” section of the AF Form 8. **(T-2)**.

Chapter 3

EVALUATION CRITERIA

3.1. General Grading Standards.

3.1.1. The grading criteria in this chapter are divided into three sections: general, instrument, and tactical employment. Use all sections for criteria applicable to the events performed during the evaluation. **(T-2)**.

3.1.2. Where major areas are divided into sub-areas, only one grade will be assigned to the major areas. **(T-2)**. Annotate discrepancies on the back of the AF Form 8 by sub-area.

3.1.3. Areas marked “(P)” are for pilots only; areas marked “(AC)” are for pilots qualified as ACs only; areas marked “(W)” are for WSOs only. All other areas are common to all aircrews.

3.2. General.

3.2.1. Area 1 – Mission Planning.

3.2.1.1. Mission Planning.

3.2.1.1.1. **Q**. Developed a sound plan to accomplish the mission. Accurately and efficiently accomplished mission preparation. Established objectives for the mission. Checked all factors applicable to flight in accordance with applicable directives. Is aware of alternatives available, if flight cannot be completed as planned. The tactical plan included consideration of mission objectives, threats, restrictions, release criteria, air tasking order, special instructions (SPINS), egress routing, re-attack plan, and capabilities of all flight members. Addressed contingencies in development of plan.

3.2.1.1.2. **Q-**. Same as above, except with minor deviations, omissions, and/or errors that did not detract from mission effectiveness. Planned tactics resulted in unnecessary difficulty in accomplishing mission objectives. Knowledge of performance capabilities approved operating procedures or rules were marginal in some areas.

3.2.1.1.3. **U**. Major deviations, omissions, and/or errors would preclude safe and effective mission accomplishment. Displayed faulty knowledge of operating data or procedures. Did not review go/no-go items.

3.2.1.2. Publications.

3.2.1.2.1. **Q**. Assigned flight manual publications were current and usable for any of the unit's combat taskings. Contained only minor deviations, omissions, and/or errors.

3.2.1.2.2. **Q-**. Assigned flight manual publications contained deviations, omissions, and/or errors; however, contained everything necessary to effectively accomplish the mission and did not compromise safety of flight. Omitted minor training events.

3.2.1.2.3. **U.** Not up to "Q-" standards. Contained major deviations, omissions, and/or errors.

3.2.2. Area 2 – Briefing (if applicable).

3.2.2.1. Organization.

3.2.2.1.1. **Q.** Well organized and presented in a logical sequence. Briefed crew responsibilities, deconfliction contracts, combat mission priorities, and sensor management. Concluded formation briefing (if applicable) in time to allow for crew briefing.

3.2.2.1.2. **Q-.** Some events were presented out of sequence, hard to follow, and/or had redundancy.

3.2.2.1.3. **U.** The events were not presented in a logical sequence, causing additional confusion. Formation briefing (if applicable) did not allow time for adequate crew briefing. Failed to brief required areas.

3.2.2.2. Presentation.

3.2.2.2.1. **Q.** Presented briefing in a professional manner. Effective use of training aids. Flight members clearly understood mission requirements.

3.2.2.2.2. **Q-.** Did not make effective use of available training aids. Dwelled on non-essential mission items.

3.2.2.2.3. **U.** Did not use training aids. Presentation created doubts or confusion that directly contributed to mission failure.

3.2.2.3. Mission Coverage.

3.2.2.3.1. **Q.** Established objectives for the mission. Presented all training events and discussed effective techniques for accomplishing the mission.

3.2.2.3.2. **Q-.** Objectives were undefined and poorly quantified. Omitted minor training events.

3.2.2.3.3. **U.** Did not establish objectives for the mission. Omitted major training events.

3.2.2.4. Flight Member Consideration.

3.2.2.4.1. **Q.** Considered the abilities of all flight members. Briefed corrective action from previous mission and probable problem areas when appropriate.

3.2.2.4.2. **Q-.** Did not consider all flight members' abilities. Did not identify probable problem areas.

3.2.2.4.3. **U.** Ignored flight members' abilities and did not identify any problem areas.

3.2.3. Area 3 – Pre-Takeoff.

3.2.3.1. **Q.** Established and adhered to briefed timeline up to takeoff. Accurately determined readiness of aircraft for flight. Performed all checks and procedures prior to takeoff in accordance with approved checklists and applicable directives.

3.2.3.2. **Q-**. Same as above, except for minor procedural deviations that did not detract from mission effectiveness.

3.2.3.3. **U**. Omitted major item(s) of the appropriate checklist. Performed major deviations in procedure, which would preclude safe mission accomplishment. Failed to accurately determine readiness of aircraft for flight. Crew errors directly contributed to a late takeoff, which degraded the mission or resulted in a non-effective sortie.

3.2.4. Area 4 – Takeoff (P).

3.2.4.1. **Q**. Maintained smooth aircraft control throughout takeoff. Performed takeoff in accordance with flight manual procedures.

3.2.4.2. **Q-**. Minor flight manual procedural deviations.

3.2.4.3. **U**. Takeoff potentially dangerous. Exceeded aircraft or systems limitations. Failed to establish proper climb attitude. Over-controlled aircraft resulting in excessive deviations from intended flight path.

3.2.5. Area 5 – Departure.

3.2.5.1. **Q**. Performed departure as published or directed and complied with all restrictions. Accomplished procedures and checklists required by the flight manual and governing directives accurately and efficiently.

3.2.5.2. **Q-**. Minor deviations in airspeed or navigation occurred during completion of departure. Minor omissions, deviations, and/or errors in procedures detracted from overall mission efficiency.

3.2.5.3. **U**. Failed to comply with published or directed departure instructions. Major omissions, deviations, and/or errors in procedures.

3.2.6. Area 6 – Level Off (P).

3.2.6.1. **Q**. Level off was smooth. Promptly established proper cruise airspeed.

3.2.6.2. **Q-**. Level off was erratic. Slow in establishing proper cruise airspeed. Slow to set or reset altimeter, as required.

3.2.6.3. **U**. Level off was extremely erratic. Exceeded “Q-” limits. Excessive delay or failed to establish proper cruise airspeed. Failed to set or reset altimeter, as required.

3.2.7. Area 7 – Enroute Navigation.

3.2.7.1. **Q**. Demonstrated satisfactory capability to navigate using all available means. Used appropriate navigation procedures. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace. Made all control times within published or briefed tolerances. WSO advised pilot of altitude deviations prior to exceeding ± 200 feet (W).

3.2.7.2. **Q-**. Minor errors in procedures or use of navigation equipment. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and course. Performance demonstrated a lack of knowledge or ability that could have affected mission accomplishment. WSO advised pilot of altitude deviations exceeding ± 300 feet (W).

3.2.7.3. **U.** Major errors in procedures or use of navigation equipment. Could not establish position. Failed to recognize checkpoints or adjust for deviations in time and course. Did not remain within the confines of assigned airspace. Exceeded parameters for “Q-.”

3.2.8. Area 8 – Formation Operations.

3.2.8.1. Flight Lead.

3.2.8.1.1. Flight Lead (P).

3.2.8.1.1.1. **Q.** Established and maintained effective formation for employment of assigned weapons utilizing published and briefed procedures. Planned and briefed altitude consistent with mission requirement and restrictions. Maintained positive control of flight. Effective wingman consideration. Ensured deconfliction contracts were adhered to. Planned ahead and made timely decisions.

3.2.8.1.1.2. **Q-.** Planned and briefed ineffective formation for assigned weapons, but did not compromise safety. Made minor deviations from published and or briefed procedures. Demonstrated limited flight management. Did not always plan ahead or make timely decisions.

3.2.8.1.1.3. **U.** Formation flight was not accomplished in accordance with published and/or briefed procedures. Failed to account for formation employment of assigned weapons. Provided little wingman consideration. Indecisive. Failed to maintain deconfliction contracts.

3.2.8.1.2. Multi-Ship Mission Lead (W).

3.2.8.1.2.1. **Q.** Established and maintained effective formation for employment of assigned weapons utilizing published and briefed procedures. Effective wingman consideration. Ensured adherence to deconfliction contracts. Planned ahead and made timely decisions.

3.2.8.1.2.2. **Q-.** Planned and briefed ineffective formation for assigned weapons, but did not compromise safety. Made minor deviations from published and or briefed procedures that negatively affected mission. Did not always plan ahead or make timely decisions.

3.2.8.1.2.3. **U.** Formation flight was not accomplished in accordance with published and/or briefed procedures affecting mission negatively. Failed to account for formation employment of assigned weapons. Provided little wingman consideration. Indecisive. Failed to maintain deconfliction contracts.

3.2.8.2. Wingman.

3.2.8.2.1. Pilot.

3.2.8.2.1.1. **Q.** Maintained position in accordance with published and/or briefed procedures with only momentary deviations. Demonstrated appropriate position corrections. Maintained appropriate separation and complied with FL's instructions. Maintained briefed deconfliction contract. Maintained mutual support during entire employment (ingress through egress). Rejoin was smooth

and timely.

3.2.8.2.1.2. **Q-.** Made minor deviations to published and/or briefed procedures. Slow to comply with FL's instructions. Mutual support occasionally failed but did not affect mission effectiveness. Slow to rejoin.

3.2.8.2.1.3. **U.** Formation flight not accomplished in accordance with published and/or briefed procedures. Did not comply with FL's instructions. Unable to maintain a formation position. Failed to maintain deconfliction contract.

3.2.8.2.2. WSO.

3.2.8.2.2.1. **Q.** Effectively monitored formation utilizing published and/or briefed procedures. Provided timely and accurate description and direction of flight to maintain appropriate formation, position or rejoin. Maintained briefed deconfliction contract.

3.2.8.2.2.2. **Q-.** Made minor deviations from published and/or briefed procedures. Demonstrated limited formation monitoring. Occasionally slow or hesitant to provide description and direction as necessary to ensure correct formation, position or rejoin.

3.2.8.2.2.3. **U.** Formation flight not accomplished in accordance with published and/or briefed procedures. Provided inaccurate or little or no description or direction necessary to ensure appropriate formation and rejoin. Failed to maintain deconfliction contract.

3.2.9. Area 9 – System Checks.

3.2.9.1. **Q.** Performed all in-flight checks as required. Thorough knowledge and performance of system checks. Accurately and efficiently analyzed equipment malfunctions with consistent reliable mission results.

3.2.9.2. **Q-.** Same as above, except for minor deviations or omissions during checks. Limited knowledge of checks. Unsure of systems degradation due to check failure. Did not detract from mission accomplishment.

3.2.9.3. **U.** Did not perform in-flight checks or monitor systems to the degree that an emergency condition could have developed if allowed to continue uncorrected. General lack of knowledge on how to perform system checks. Unable to determine systems degradation due to check failures.

3.2.10. Area 10 – Fuel Management (P).

3.2.10.1. **Q.** Actively monitored fuel throughout the mission. Complied with all established fuel requirements. Adhered to briefed Joker and Bingo contracts.

3.2.10.2. **Q-.** Demonstrated errors in fuel management procedures that did not preclude mission accomplishment.

3.2.10.3. **U.** Failed to monitor fuel status or comply with established fuel requirements. Poor fuel management precluded mission accomplishment. Did not adhere to briefed fuel requirements.

3.2.11. Area 11 – Sensor Operation.

3.2.11.1. Sensor Interpretation.

3.2.11.1.1. **Q.** Correctly interpreted radar, targeting pod, and Link-16 displays. Was able to compensate for system errors or unanticipated developments to successfully employ using radar, targeting pod and Link-16.

3.2.11.1.2. **Q-.** Slow to interpret radar, targeting pod, and Link-16 displays. Had difficulties compensating for system errors or unanticipated developments.

3.2.11.1.3. **U.** Could not interpret radar, targeting pod and Link-16 displays. Could not compensate for or identify system errors or unanticipated developments.

3.2.11.2. Sensor Management.

3.2.11.2.1. **Q.** Correctly planned, briefed, prioritized, and executed a sound sensor management plan. Identified high task periods and primary, secondary, and tertiary sensors based on mission priorities and flight member responsibilities. Accounted for threats, changes in tasking, weather, and flight member experience. Re-prioritized sensor tasks based on existing and new information to ensure mission success. Displayed sound knowledge of sensor systems.

3.2.11.2.2. **Q-.** Made minor errors in planning, prioritization, and management of sensor tasks. Did not completely account for threats, changes in tasking, weather, or flight member experience.

3.2.11.2.3. **U.** Incorrectly managed sensor tasks in a manner that seriously degraded mission accomplishment or safety of flight. Over-tasked other flight members or failed to communicate task over-load. Displayed lack of knowledge of sensor systems.

3.2.11.3. Radar Operation (W).

3.2.11.3.1. **Q.** Demonstrated satisfactory knowledge and effective application of radar in accordance with T.O. 1B-1B-1-2, *Weapons Systems Officer's Flight Manual*, AFTTP 3-3.B-1, *Combat Aircraft Fundamentals B-1*, and AFTTP 3-1.B-1, *Tactical Employment B-1 (U)*. Utilized radar to maximum extent possible.

3.2.11.3.2. **Q-.** Demonstrated adequate knowledge of radar techniques. Did not establish radar search responsibilities. Ineffectively applied radar operation and/or TTPs.

3.2.11.3.3. **U.** Demonstrated unsatisfactory knowledge and/or application of radar responsibilities, operations, and/or TTPs.

3.2.11.4. Targeting Pod Operation.

3.2.11.4.1. **Q.** Correctly operated the sensor to acquire the target in accordance with T.O. 1B-1B-1-2, AFTTP 3-3.B-1 and AFTTP 3-1.B-1. Was able to properly search and tune the sensor display to aid weapons delivery.

3.2.11.4.2. **Q-.** Poor configuration of sensor and or poor search technique hindered target identification delaying weapons delivery. Did not thoroughly understand tuning and/or search procedures.

3.2.11.4.3. **U.** Improper configuration of sensor prevented target identification or weapons delivery. Poor use of settings and controls resulted in an unusable sensor. Did not understand basic configuration and functions of targeting pod. Improper search technique resulted in late or no target acquisition.

3.2.12. Area 12 – Equipment Operations.

3.2.12.1. **Q.** Operated equipment according to procedures and checklists contained in the flight manuals and governing directives. Accurately and efficiently analyzed equipment malfunctions with consistent reliable mission results. No damage or significant system degradation resulted from operator inputs or lack of knowledge.

3.2.12.2. **Q-.** Operated equipment with minor deviations, omissions, and/or errors from procedures required by the flight manual or governing directives. Equipment malfunctions were consistently ignored, analyzed in error, or caused by erroneous data insertion. Deviations, omissions, and/or errors in malfunction analysis and prescribed procedures caused a degradation of equipment performance. The level of performance or knowledge consistently resulted in marginal reliability. Did not damage equipment.

3.2.12.3. **U.** Not up to "Q-" standards. Equipment damage would have resulted due to circumstances within operator's control. Could not recognize a major equipment malfunction. Could not obtain acceptable results due to poor operational procedures.

3.2.13. Area 13 – Communications/Transponder Use.

3.2.13.1. **Q.** Complete knowledge of and compliance with correct communication and transponder procedures. Transmissions were concise, accurate, utilized proper terminology, and effectively used to direct maneuvers or describe the tactical situation where applicable. Complied with and acknowledged all required instructions. Complied with AFMAN 11-202V3 transponder operations, AFTTP 3-3.B-1, and AFTTP 3-1.B-1 Identification, Friend or Foe (IFF) use. Thoroughly familiar with communications security requirements, HAVE QUICK, and secure voice equipment (if applicable).

3.2.13.2. **Q-.** Occasional deviations from correct procedures required re-transmissions or resetting codes. Slow in initiating or missed several required calls. Minor errors or omissions did not significantly detract from situational awareness, threat warning, or mission accomplishment. Transmissions contained extraneous chatter, were not in proper sequence, or used nonstandard terminology. Demonstrated limited knowledge of communications security requirements, HAVE QUICK, and secure voice equipment (if applicable).

3.2.13.3. **U.** Performed incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Incorrect transponder or IFF use. Omitted numerous required radio calls. Inaccurate or confusing terminology significantly detracted from situational awareness, threat warning, or mission accomplishment. Displayed inadequate knowledge of communications security requirements, HAVE QUICK, and secure voice equipment (if applicable).

3.2.14. Area 14 – Crew Resource Management (CRM). Evaluation criteria is in accordance with AFI 11-290, *Cockpit/Crew Resource Management Program*, and derived from AF Form 4031, *CRM Skills Criteria Training/Evaluation*.

3.2.14.1. **Q.** Effectively coordinated with other crewmembers and flight members during all phases of the mission. Effectively used CRM.

3.2.14.2. **Q-.** Coordination was lacking with other crewmembers and flight members to the extent minor deviations or omissions caused delays, confusion, degraded the successful delivery of weapons, and/or crew situational awareness. Crew communications were confusing and/or not well understood.

3.2.14.3. **U.** Breakdown in coordination with other crewmembers and flight members precluded mission accomplishment or jeopardized safety. CRM was lacking to the extent the mission accomplishment was severely degraded. Created confusion or delays which could have endangered the aircraft or prevented reliable weapon delivery.

3.2.15. Area 15 – Air Refueling (if applicable).

3.2.15.1. Air Refueling Rendezvous. Any rendezvous may satisfy this requirement. Procedures will be in accordance with Allied Tactical Publication (ATP)-3.3.4.2, *Air-to-Air Refueling*. **(T-0)**.

3.2.15.1.1. **Q.** Rendezvous was accomplished using proper procedures. Demonstrated effective use of radio communications. Used proper communication procedures for briefed emission control level. Positively identified tanker by radar or visually and did not delay final closure.

3.2.15.1.2. **Q-.** Rendezvous delayed by improper techniques, procedures, or radio communications.

3.2.15.1.3. **U.** Displayed lack of knowledge or familiarity with procedures to the extent that AR was or could have been jeopardized. Failed rendezvous because of improper procedures. Committed gross overshoot, spent excessive time in trail, or safety of flight was jeopardized due to poor judgement.

3.2.15.2. Air Refueling Procedures (P). Contact time should be a minimum of 10 minutes. If unable to meet the minimum contact time due to circumstances beyond the aircrew's control, FE discretion will be used to determine the examinee's ability to receive onloads commensurate with unit taskings. **(T-2)**.

3.2.15.2.1. **Q.** Expeditiously established and maintained proper position. Used proper procedures. Aircraft control was positive and smooth. Refueled with no more than three pilot-induced disconnects.

3.2.15.2.2. **Q-.** Slow to recognize and apply needed corrections to establish and maintain proper position. Aircraft control was not always positive and smooth, but adequate. Accomplished published or directed procedures with deviations or omissions that did not affect the successful completion of AR. Performance caused no more than four pilot-induced disconnects.

3.2.15.2.3. **U.** Used unacceptable procedures. Excessive time to hookup delayed mission accomplishment. Unable to maintain contact position. Caused more than four pilot-induced disconnects. Unable to safely accomplish AR.

3.2.16. Area 16 – Descent.

3.2.16.1. **Q.** Performed descent as directed and complied with all restrictions. Accomplished procedures and checklists required by the flight manual and governing directives accurately and efficiently.

3.2.16.2. **Q-.** Performed descent as directed with minor deviations. Accomplished procedures and checklists required by the flight manual and governing directives with minor omissions, deviations, or errors.

3.2.16.3. **U.** Performed descent with major deviations. Procedures were accomplished with major deviations, omissions, and/or errors demonstrating unacceptable knowledge or performance of the flight manual or governing directives.

3.2.17. Area 17 – Go Around (P).

3.2.17.1. **Q.** Initiated and performed go-around promptly in accordance with manual and operational procedures and directives.

3.2.17.2. **Q-.** Slow to initiate go-around or procedural steps.

3.2.17.3. **U.** Did not self-initiate go-around when appropriate or directed. Applied incorrect procedures. Applied erratic aircraft control. Exhibited large deviations in runway alignment.

3.2.18. Area 18 – Emergency Traffic Pattern (P). [Prior to configuration]. Includes simulated engine failure and no-flap emergency, pattern, as appropriate.

3.2.18.1. **Q.** Complied with all flight manual and operational procedures. Maintained safe maneuvering airspeed and angle of attack (AOA). Flew approach compatible with the situation. Adjusted approach for type emergency simulated.

3.2.18.2. **Q-.** Committed minor procedural errors. Applied erratic airspeed and AOA control. Errors did not detract from safe handling of the situation.

3.2.18.3. **U.** Did not comply with applicable procedures. Erratic airspeed and AOA control compounded problems associated with the emergency. Flew an approach that was incompatible with the simulated emergency. Did not adjust approach for simulated emergency.

3.2.19. Area 19 – Emergency Approach and Landing (P). [Configuration through completion of pattern]. The simulated emergency may be executed as a touch-and-go landing. The event may be dual-logged with Area 40: Landing from an Instrument Approach.

3.2.19.1. **Q.** Performed emergency procedures in accordance with applicable directives. Adequately prioritized actions to safely recover the aircraft. Maintained aircraft control within appropriate standards.

3.2.19.2. **Q-.** Performed emergency procedures with minor deviations, omissions, and/or errors that did not jeopardize the safe recovery of the aircraft.

3.2.19.3. **U.** Performed emergency procedures with major deviations, omissions, and/or errors. Unable to safely recover the aircraft.

3.2.20. Area 20 – Visual Pattern or Approach (P).

3.2.20.1. **Q.** Performed patterns and approaches in accordance with procedures outlined in the flight manual, operational procedures, and local directives. Aircraft control was smooth and positive. Accurately aligned with runway. Maintained proper or briefed airspeed and AOA. Quick to recognize and correct any deviations. AOA ± 1 degree on final approach.

3.2.20.2. **Q-.** Performed patterns and approaches with minor deviations to procedures outlined in the flight manual, operational procedures, and local directives. Aircraft control was not consistently smooth, but safe. Alignment with runway varied. Slow to correct to proper or briefed airspeed and AOA. AOA $\pm 1 \frac{1}{2}$ degrees on final approach.

3.2.20.3. **U.** Approaches not performed in accordance with procedures outlined in the flight manual, operational procedures, and local directives. Applied erratic aircraft control. Exhibited large deviations in runway alignment. Exceeded "Q-" parameters.

3.2.21. Area 21 – Normal Landing (P). This may be executed as a touch-and-go landing and may be dual logged with Area 40: Landing from an Instrument Approach.

3.2.21.1. **Q.** Performed landings in accordance with procedures outlined in the flight manual, operational procedures, and local directives. Aircraft control was smooth and positive. Accurate runway alignment.

3.2.21.2. **Q-.** Performed landings in accordance with procedures outlined in the flight manual, operational procedures, and local directives with minor deviations, omissions, and/or errors, which did not jeopardize safety of flight. Aircraft control was rough; however runway alignment was accomplished.

3.2.21.3. **U.** Landing was not performed in accordance with procedures outlined in the flight manual, operational procedures, and local directives. Not up to "Q-" standards.

3.2.22. Area 22 – After Landing.

3.2.22.1. **Q.** Appropriate after-landing checks and aircraft taxi procedures accomplished in accordance with the flight manual and applicable directives. Completed all required forms accurately.

3.2.22.2. **Q-.** Same as above, except some deviations or omissions noted in performance of after-landing check and/or aircraft taxi procedures. Safety was not jeopardized. Required forms completed with minor deviations, omissions, and/or errors.

3.2.22.3. **U.** Major deviations, omissions, and/or errors were made in performance of after-landing check or aircraft taxi procedures, which could have jeopardized safety. Data recorded inaccurately or omitted. Not up to "Q-" standards.

3.2.23. Area 23 – Debriefing.

3.2.23.1. **Q.** Thoroughly debriefed the mission (or applicable portions). Compared mission results with initial objectives that were established for the mission. Debriefed deviations. Offered corrective guidance as appropriate.

3.2.23.2. **Q-.** Provided limited debriefing. Did not thoroughly discuss performance in relationship to mission objectives. Did not debrief all deviations.

3.2.23.3. **U.** Did not debrief mission deviations or offer corrective guidance.

3.2.24. Area 24 – Knowledge. Evaluate all applicable sub-areas.

3.2.24.1. Aircraft General.

3.2.24.1.1. **Q.** Demonstrated thorough knowledge of aircraft systems, limitations, and performance characteristics.

3.2.24.1.2. **Q-.** Knowledge of aircraft systems, limitations, and performance characteristics were sufficient to perform the mission safely. Demonstrated deficiencies either in depth of knowledge or comprehension.

3.2.24.1.3. **U.** Demonstrated unsatisfactory knowledge of aircraft systems, limitations, or performance characteristics.

3.2.24.2. Takeoff and Landing Data.

3.2.24.2.1. **Q.** Computed all minimum runway required, critical field length, takeoff, and landing distances within ± 500 feet. All computed speeds were within ± 5 knots.

3.2.24.2.2. **Q-.** Computed all minimum runway required, critical field length, takeoff, and landing distances within ± 800 feet. All computed speeds were within ± 10 knots.

3.2.24.2.3. **U.** Exceeded criteria for “Q-.”

3.2.24.3. Emergency Procedures.

3.2.24.3.1. **Q.** Displayed correct, immediate response to emergency situations. Effectively used checklist.

3.2.24.3.2. **Q-.** Response to certain emergencies was slow or confused. Used the checklist when appropriate, but slow to locate required data.

3.2.24.3.3. **U.** Unable to analyze problems or take corrective action. Did not use checklist, or lacks acceptable familiarity with its arrangement or contents.

3.2.24.4. Flight Rules and Procedures.

3.2.24.4.1. **Q.** Possessed thorough knowledge of flight rules and procedures. Thorough knowledge of local area procedures.

3.2.24.4.2. **Q-.** Exhibited deficiencies in depth of knowledge. Limited knowledge of local area procedures.

3.2.24.4.3. **U.** Had inadequate knowledge of flight rules and procedures. Had inadequate knowledge of local area procedures.

3.2.24.5. Weapons/Tactics/Threats.

3.2.24.5.1. **Q.** Thorough knowledge of all aircraft weapons systems, weapons effects, tactics, and threats applicable to the unit mission.

3.2.24.5.2. **Q-.** Deficiencies in depth of knowledge or comprehension of weapons systems, weapons effects, tactics, and threat knowledge that would not preclude successful mission accomplishment.

3.2.24.5.3. **U.** Insufficient knowledge of weapons, tactics, and threat contributed to ineffective mission accomplishment.

3.2.25. Area 25 – Airmanship (Critical).

3.2.25.1. **Q.** Executed the assigned mission in a timely, efficient manner. Conducted the flight with a sense of understanding and comprehension. Aware of performance of self and other flight members. Recognized, verbalized, and acted on unexpected events.

3.2.25.2. **U.** Decisions or lack thereof resulted in failure to accomplish the assigned mission. Demonstrated poor judgment or situational awareness to the extent which safety could have been compromised. Resources were not always effectively used to the extent that specific mission objectives were not achieved.

3.2.26. Area 26 – Safety (Critical).

3.2.26.1. **Q.** Aware of and complied with all safety factors required for safe aircraft operations and conduct of the mission.

3.2.26.2. **U.** Was not aware of or did not comply with all safety factors required for safe operations or conduct of the mission. Failed to correctly accomplish boldface procedures. Operated the aircraft or equipment in a dangerous manner.

3.2.27. Area 27 – Aircrew Discipline (Critical).

3.2.27.1. **Q.** Demonstrated strict professional flight and crew discipline throughout all phases of the mission.

3.2.27.2. **U.** Failed to exhibit strict flight or crew discipline. Violated or ignored rules or regulations.

3.2.28. Area 28 – Task Prioritization.

3.2.28.1. **Q.** Correctly identified, prioritized, and managed tasks based on existing and new information that assured mission success. Used available resources to manage workload and communicated task priorities to other crewmembers. Asked for assistance when overloaded. Displayed sound knowledge of systems. Effectively identified contingencies and alternatives. Gathered and crosschecked available data before acting. Clearly stated decisions and ensured they were understood. Investigated doubts and concerns of other crewmembers when necessary.

3.2.28.2. **Q-.** Made minor errors in prioritization, management of tasks or system knowledge that did not affect safe or effective mission accomplishment. Did not completely communicate task priorities to other crewmembers. Made minor errors in identifying contingencies, gathering data, or communicating a decision that did not affect safe or effective mission accomplishment.

3.2.28.3. **U.** Incorrectly prioritized or managed tasks. Displayed lack of systems knowledge causing task overload that seriously degraded mission accomplishment or safety of flight. Failed to communicate task priorities to other crewmembers. Failed to ask for assistance when overloaded. Improperly or ineffectively identified contingencies, gathered data, or communicated a decision that seriously degraded mission accomplishment or safety of flight.

3.2.29. Area 29 – Pilot in Command (PIC) (AC only).

3.2.29.1. **Q.** Executed all PIC duties in accordance with directives found in AFMAN 11-2B-1V3 and AFMAN 11-202V3. Demonstrated sound judgment expected and required from AC qualified pilots.

3.2.29.2. **U.** Failed to properly execute all PIC duties. Exhibited errors in judgment not expected or tolerated from AC qualified pilots.

3.2.30. Area 30 – Flight or Mission Leadership (if applicable).

3.2.30.1. **Q.** Positively directed the aircraft or flight during accomplishment of the mission and made timely comments to correct discrepancies when required. Made sound and timely in-flight decisions.

3.2.30.2. **Q-.** In-flight decisions delayed mission accomplishment or degraded training benefit.

3.2.30.3. **U.** Did not accomplish the mission or failed to correct in-flight discrepancies. In-flight decisions jeopardized mission accomplishment.

3.2.31. Area 31 – Instructor Performance (if applicable).

3.2.31.1. Briefing/Debriefing.

3.2.31.1.1. **Q.** Presented a comprehensive briefing and debriefing. Made use of available training aids. Analyzed all events and maneuvers. Clearly defined objectives.

3.2.31.1.2. **Q-.** Had minor errors or omissions in briefing, debriefing, or mission critique. Occasionally unclear in analysis of events or maneuvers.

3.2.31.1.3. **U.** Had major errors or omissions in briefing or debriefing. Analysis of events or maneuvers was incomplete, inaccurate, or confusing. Did not use available training aids or reference material effectively. Briefing or debriefing below the caliber expected of instructors. Failed to define mission objectives.

3.2.31.2. Demonstration of Maneuvers/Equipment Operation.

3.2.31.2.1. **Q.** Performed required maneuvers or procedures within prescribed parameters. Provided concise, meaningful in-flight commentary. Demonstrated sound instructor proficiency.

3.2.31.2.2. **Q-.** Performed required maneuvers or procedures with minor deviations from prescribed parameters. In-flight commentary was sometimes unclear.

3.2.31.2.3. **U.** Was unable to properly perform required maneuvers or procedures. Made major procedural errors. Did not provide in-flight commentary. Demonstrated below-average instructor proficiency.

3.2.31.3. Instructor Knowledge.

3.2.31.3.1. **Q.** Demonstrated in-depth knowledge of procedures, requirements, aircraft systems and performance characteristics, mission, and tactics beyond the expectation of non-instructors.

3.2.31.3.2. **Q-**. Deficiencies noted in the depth of knowledge, comprehension of procedures, requirements, aircraft systems, performance characteristics, mission, or tactics.

3.2.31.3.3. **U**. Unfamiliar with procedures, requirements, aircraft systems, performance characteristics, mission, or tactics. Lack of knowledge in certain areas seriously detracted from instructor effectiveness.

3.2.31.4. Ability to Instruct.

3.2.31.4.1. **Q**. Demonstrated sound instructor ability. Clearly defined all mission requirements and any required additional training or corrective action. Instruction and evaluation was accurate, effective, and timely. Was completely aware of aircraft and mission situation at all times.

3.2.31.4.2. **Q-**. Problems in communication or analysis degraded effectiveness of instruction or evaluation.

3.2.31.4.3. **U**. Demonstrated inadequate ability to instruct or evaluate. Unable to perform, teach, or assess techniques, procedures, systems use, or tactics. Did not remain aware of aircraft or mission situation at all times.

3.2.31.5. Training Forms Preparation.

3.2.31.5.1. **Q**. Completed appropriate training and evaluation records accurately. Adequately assessed and recorded performance. Comments were clear and pertinent.

3.2.31.5.2. **Q-**. Minor errors or omissions in training or evaluation records. Comments were incomplete or slightly unclear.

3.2.31.5.3. **U**. Did not complete required forms or records. Comments were invalid, unclear, or did not accurately document performance.

3.3. Instrument.

3.3.1. Area 32 – Holding (P).

3.3.1.1. **Q**. Performed entry and holding in accordance with published procedures and directives. Tactical air navigation (TACAN) holding pattern limit exceeded by not more than ± 2 NM.

3.3.1.2. **Q-**. Minor deviations to procedures or directives. TACAN holding pattern limit exceeded by not more than ± 3 NM.

3.3.1.3. **U**. Holding was not in accordance with published procedures and directives. Exceeded criteria for “Q-” or holding pattern limits.

3.3.2. Area 33 – Instrument Penetration or Enroute Descent (P).

3.3.2.1. **Q**. Performed the penetration or enroute descent and approach as published or directed and in accordance with applicable flight manuals. Complied with all restrictions. Made smooth and timely corrections.

3.3.2.2. **Q-**. Performed the penetration or enroute descent and approach with minor deviations. Complied with all restrictions. Slow to make corrections.

3.3.2.3. **U.** Performed the penetration or enroute descent and approach with major deviations. Erratic corrections.

3.3.3. Area 34 – Instrument Pattern (P).

3.3.3.1. **Q.** Performed procedures as published or directed and in accordance with flight manual. Smooth and timely response to controller instruction.

3.3.3.2. **Q-.** Performed procedures with minor deviations. Slow to respond to controller instruction.

3.3.3.3. **U.** Performed procedures with major deviations or erratic corrections. Failed to comply with controller instruction.

3.3.4. Area 35 – Non-Precision Approach (P).

3.3.4.1. **Q.** Adhered to all published or directed procedures and restrictions. Used appropriate descent rate to arrive at minimum descent altitude (MDA) at or before the visual descent point (VDP) or missed approach point (MAP). Position would have permitted a safe landing. Maintained proper or briefed airspeed and AOA. Criteria includes:

3.3.4.1.1. Airspeed +10/-5 knots AOA \pm 1 degree on final approach.

3.3.4.1.2. Heading \pm 5 degrees (airport surveillance radar).

3.3.4.1.3. Course \pm 5 degrees at MAP.

3.3.4.1.4. Localizer less than one dot deflection.

3.3.4.1.5. Minimum Descent Altitude +100/-0 feet.

3.3.4.2. **Q-.** Performed approach with minor deviations. Arrived at MDA at or before the MAP, but past the VDP. Position would have permitted a safe landing. Slow to correct to proper or briefed AOA. Criteria includes:

3.3.4.2.1. Airspeed +15/-5 knots AOA \pm 1 1/2 degrees on final approach.

3.3.4.2.2. Heading \pm 10 degrees (airport surveillance radar).

3.3.4.2.3. Course \pm 10 degrees at MAP.

3.3.4.2.4. Localizer within two dots deflection.

3.3.4.2.5. Minimum Descent Altitude +150/-50 feet.

3.3.4.3. **U.** Did not comply with published or directed procedures or restrictions. Exceeded “Q-” limits. Maintained steady state flight below the MDA, even though the -50 foot limit was not exceeded. Could not land safely from the approach. The -50 foot tolerance applies only to momentary excursions.

3.3.5. Area 36 – Precision Approach (P).

3.3.5.1. **Q.** Performed procedures as published and in accordance with applicable flight manual. Smooth and timely corrections to azimuth and glide slope and/or controller's instructions. Remained at or above decision height until seeing the runway environment and maintained a position which would have permitted a safe landing. Maintained proper or briefed airspeed and AOA. Criteria includes:

3.3.5.1.1. Airspeed +10/-5 knots/ AOA \pm 1 degree on final approach.

3.3.5.1.2. Glide slope and azimuth within one dot of instrument landing system (ILS).

3.3.5.1.3. Heading within five degrees of controller instruction (precision approach radar(PAR)).

3.3.5.2. **Q-**. Performed procedures with minor deviations. Slow to make corrections or initiate procedures. Position would have permitted a safe landing. Slow to correct to proper or briefed airspeed and AOA. Initiated appropriate action at decision height \pm 50 feet. Criteria includes:

3.3.5.2.1. Airspeed +15/-5 knots/ AOA \pm 1 ½ degrees on final approach.

3.3.5.2.2. Glide slope within one dot low or two dots high (ILS/airborne instrument landing approach (AILA)).

3.3.5.2.3. Azimuth within two dots (ILS/AILA).

3.3.5.2.4. Heading within 10 degrees of controller instruction (PAR).

3.3.5.3. **U**. Performed procedures with major deviations. Applied erratic corrections. Exceeded “Q-” limits. Descended below decision height or placed aircraft in a position that would not have permitted a safe landing.

3.3.6. Area 37 – Missed Approach (P).

3.3.6.1. **Q**. Executed missed approach as published or directed. Completed all procedures in accordance with applicable flight manuals and directives.

3.3.6.2. **Q-**. Executed missed approach with minor deviations. Slow to comply with published procedures, controller's instructions, or flight manual procedures.

3.3.6.3. **U**. Executed missed approach with major deviations, or did not comply with applicable directives.

3.3.7. Area 38 – Circling/Side-step Approach (P).

3.3.7.1. **Q**. Performed circling or side-step approach in accordance with procedures outlined in the flight manual and directives. Aircraft control was positive and smooth. Executed proper runway alignment.

3.3.7.2. **Q-**. Performed circling or side-step approach with minor deviations to procedures outlined in the flight manual and directives. Aircraft control was not consistently smooth, but safe. Runway alignment varied, but go-around not required.

3.3.7.3. **U**. Circling or side-step approach not performed in accordance with procedures outlined in the flight manual and directives. Applied erratic aircraft control. Large deviations in runway alignment required go-around.

3.3.8. Area 39 – Instrument Crosscheck (P).

3.3.8.1. **Q**. Performed effective instrument crosscheck during actual or simulated instrument meteorological conditions (IMC) in accordance with applicable flight manuals and directives. Complied with all restrictions. Made smooth and timely corrections.

Meets "Q" criteria listed in [paragraph 1.5.4](#), applicable special events, or instrument final approaches.

3.3.8.2. **Q-**. Performed slow instrument crosscheck during actual or simulated IMC with minor deviations. Complied with all restrictions, however made abrupt corrections as a result of slow instrument crosscheck. Meets "Q-" criteria listed in [paragraph 1.5.4](#), applicable special events, or instrument final approaches.

3.3.8.3. **U**. Failed to adequately perform an instrument crosscheck during actual or simulated IMC causing major deviations. Applied erratic corrections because of poor instrument crosscheck.

3.3.9. Area 40 – Landing from an Instrument Approach (P). Landing evaluation criteria is in accordance with Area 21: Normal Landing (see [paragraph 3.2.21](#)), and must be accomplished following an instrument approach . (T-2). This area can be executed as a touch-and-go landing and dual logged with Area 21: Normal Landing, or Area 19: Emergency Approach and Landing.

3.4. Tactical Employment.

3.4.1. Area 41 – Tactical Package Integration.

3.4.1.1. **Q**. Effectively planned and integrated with package assets to enhance mission and achieve objectives. No confusion between package assets that did not degrade mission effectiveness. Effectively integrated tactical (TAC) command and control (C2), escort, suppression of enemy air defenses (SEAD), strike, and intelligence, surveillance and reconnaissance (ISR) assets into tactical plan. Requested threat picture when required. Communicated changes in the tactical situation, weather, and threats to C2 agencies.

3.4.1.2. **Q-**. Minor confusion between package assets. Less-than-optimum use of package assets, which significantly detracted from mission success. Slow to integrate TAC C2, escort, SEAD, strike, and ISR assets into tactical plan. Slow to request threat picture. Incomplete communication of changes in the tactical situation, weather, and threats to C2 agencies.

3.4.1.3. **U**. Inadequate or incorrect use of package assets resulted in mission failure. Failed to integrate TAC C2, escort, SEAD, strike, and ISR assets into tactical plan. Failed to request threat picture when required. Inadequate communication of changes in the tactical situation, weather, and threats to Command and Control agencies.

3.4.2. Area 42 – Tactical Execution.

3.4.2.1. **Q**. Applied tactics consistent with the threat, current directives, and good judgment. Executed the plan and achieved mission goals. Quickly adapted to changing environment. Maintained situational awareness. Threat reactions were timely and correct.

3.4.2.2. **Q-**. Applied tactics with only minor deviations, omissions, and/or errors which degraded the reliable release of weapons or mission effectiveness, but did not prevent the successful accomplishment of the overall mission goal. Slow to react to a changing environment. Situational awareness and timely threat reactions were poor.

3.4.2.3. **U.** Unable to accomplish the mission due to major errors or omissions during execution of the tactical plan. Situational awareness lost. Numerous threat reactions were omitted or incorrect. Failed to perform maneuvers to counter threat.

3.4.3. Area 43 – Tactical Navigation.

3.4.3.1. General.

3.4.3.1.1. **Q.** All control times were met within air tasking order, SPINS, governing directives, or briefed tolerances. Time on target (TOT) tolerances met or covered the TOT window. Navigated to desired destination and remained geographically oriented during the tactical portion of the mission along the desired route. Altitude and route of flight reflected consideration for enemy threats. Maintained terrain awareness. Complied with established altitude minimums. Adhered to airspace restrictions. Airspace restrictions include buffer zones, restrictive fire plans, fire support coordination lines, friendly artillery fans, ingress and egress corridors, and other airspace restrictions.

3.4.3.1.2. **Q-.** Deviations from planned route of flight were recognized and corrected. Maintained terrain awareness. Altitude control contributed to exposure to threats for brief periods. Did not optimize terrain masking (if applicable).

3.4.3.1.3. **U.** Exceeded “Q-” parameters. Failed to locate desired destination. Failed to cover TOT window due to inadequate planning or use of resources. Deviations from planned route of flight exposed flight to threats. Violated airspace restrictions or altitude minimums. Poor airspeed or altitude control contributed to disorientation. Inadequate terrain awareness. Did not use terrain masking (if applicable).

3.4.3.2. Medium Altitude.

3.4.3.2.1. **Q.** Used proper procedures. Properly used available aids to navigation. Maintained altitude consistent with mission requirements and restrictions. Demonstrated satisfactory capability to adjust for deviations in time and course; only minor corrections required.

3.4.3.2.2. **Q-.** Exhibited errors in procedures. Exhibited minor errors in use of available navigation aids. Exhibited minor deviations from planned altitude. Medium level course and airspeed control resulted in large corrections. Exhibited minor errors in procedures or use of navigation equipment.

3.4.3.2.3. **U.** Unable to use alternate or appropriate navigation aids. Exceeded “Q-” tolerances. Major altitude deviations. Failed to recognize checkpoints or adjust for deviations in course. Exhibited major errors in procedures or use of navigation equipment.

3.4.4. Area 44 – Tactical Ingress and Egress.

3.4.4.1. **Q.** Aware of all known and/or simulated threats and defenses. Employed effective route and altitude selection. Receiver monitoring and procedures were accomplished in accordance with operating directives. Effectively used evasive maneuvers to complete an expeditious egress from the target area. Flight join-up was accomplished as soon as possible without undue exposure to enemy defenses.

3.4.4.2. **Q-**. Ignored some of the known and/or simulated threats and defenses. Improper route and altitude selection resulted in unnecessary exposure. Procedures were accomplished with only minor deviations, omissions, or errors demonstrating minimum acceptable knowledge or performance of the flight manual or governing directives. Egress contributed to unnecessary exposure to threats and delayed flight join-up and departure from target area. Required actions were incomplete or were accomplished with minor deviations, omissions, and/or errors.

3.4.4.3. **U**. Failed to honor known and/or simulated threats and defenses significantly reducing survivability. Failed to employ effective route or altitude threat deconfliction. Procedures were accomplished with major deviations, omissions, and/or errors demonstrating unacceptable knowledge or performance of the flight manual or governing directives. Egress caused excessive exposure to threats. Flight join-up was not accomplished or resulted in excessive exposure to threats. Required actions were not accomplished.

3.4.5. Area 45 – Timing. Timing is based on pre-planned TOT (ordnance impact) or push time. Adjustments in TOT are made for non-aircrew-caused delays. In the case of "no spot," timing is adjusted to a bomb release or splash time. If range clearance is delayed, time at a pre-planned initial point may be substituted for TOT. The FE may widen this timing criteria if the examinee was forced to maneuver extensively along the ingress route due to reactions to simulated enemy defenses, weather, outside agencies, DT employment contingencies, etc.

3.4.5.1. **Q**. Within assigned TOT window.

3.4.5.2. **Q-**. \pm 2 minutes of assigned window.

3.4.5.3. **U**. Exceeded "Q-" parameters.

3.4.6. Area 46 – Training Rules/Rules of Engagement (ROE).

3.4.6.1. **Q**. Adhered to and was knowledgeable of all training rules and ROE.

3.4.6.2. **Q-**. Minor deviations. Made timely and positive corrections. Did not jeopardize safety of flight.

3.4.6.3. **U**. Significant deviations indicating a lack of knowledge of training rules and ROE.

3.4.7. Area 47 – Tactical Maneuvering (P).

3.4.7.1. **Q**. Aircraft control during maneuvers was positive and smooth. Maneuvers were performed in accordance with directives and appropriate to the tactical situation. Adhered to established procedures.

3.4.7.2. **Q-**. Aircraft control during maneuvers were not always smooth and positive, but were adequate. Exhibited minor procedure deviations or lack of full consideration for the tactical situation.

3.4.7.3. **U**. Aircraft control was erratic. Aircraft handling caused unsatisfactory accomplishment of maneuvers. Exceeded "Q-" criteria. Failed to consider the tactical situation.

3.4.8. Area 48 – Threat Reactions.

3.4.8.1. **Q.** Threat reactions were timely and correct in accordance with AFTTP 3-3.B-1 and AFTTP 3-1.B-1. Expended appropriate countermeasures and performed maneuvers to counter threat. Maintained aircraft within design limits and normal flying parameters.

3.4.8.2. **Q-.** Threat reaction or identification was slow or inconsistent. Slow to expend appropriate countermeasures or perform maneuvers to counter threat. Maintained aircraft within design limits and normal flying parameters.

3.4.8.3. **U.** Numerous threat reactions were omitted, incorrect, or improperly identified. Failed to expend countermeasures or perform maneuvers to counter threat. Poor execution of maneuvers resulted in exceeding aircraft design limits or unsafe situation.

3.4.9. Area 49 – Electronic Warfare.

3.4.9.1. Electronic Attack (W).

3.4.9.1.1. **Q.** Required actions against surface threats were in accordance with applicable directives. Countermeasures were correctly applied in a timely manner and all threats were identified and countered with only minor deviations. Thorough knowledge of the defensive avionics system demonstrated.

3.4.9.1.2. **Q-.** Required actions were accomplished with minor deviations, omissions, and/or errors that detracted from mission effectiveness. Slow to apply countermeasures with deviations demonstrating limited knowledge of the flight manual or governing directives.

3.4.9.1.3. **U.** Required actions were accomplished with major deviations, omissions, and/or errors that significantly detracted from mission effectiveness or prevented mission accomplishment. Countermeasures were either late or inappropriate for the threat encountered demonstrating a lack of knowledge and indicating a definite need for additional training. Failed to identify or counter threats consistent with defensive avionics system capabilities.

3.4.9.2. Expendable Countermeasure Procedures. All expendable procedures (actual or simulated) are to be graded in this area.

3.4.9.2.1. **Q.** Expendable procedures were accomplished in a timely manner and, according to the flight manual and governing directives, with only minor deviations, omissions, and/or errors.

3.4.9.2.2. **Q-.** Expendable procedures were accomplished according to the flight manual and governing directives, but with deviations, omissions, and/or errors demonstrating limited knowledge of flight manual or governing directives. Slow to apply expendable countermeasures.

3.4.9.2.3. **U.** Expendable procedures were omitted, incorrect, or improperly applied with errors demonstrating a lack of knowledge of the flight manual or governing directives.

3.4.10. Area 50 – Weapons System Utilization (W).

3.4.10.1. **Q.** Correctly utilized the weapon system to deliver the desired ordnance (actual or simulated). Executed all required procedures to successfully employ the weapon.

Effectively integrated radar, global positions system (GPS), inertial navigation system (INS) position error, and targeting pod (TGP) to achieve optimum results.

3.4.10.2. **Q-**. Late to prepare the weapon system to deliver the desired ordnance. Minor procedural errors degraded weapons employment. Slow to integrate radar, GPS, INS position error, and TGP. Did not achieve optimum results.

3.4.10.3. **U**. Did not correctly prepare the weapon system to deliver the desired ordnance. Improper procedures during the attack resulted in unsuccessful weapons delivery. Failed to integrate radar, GPS, INS position error, and TGP. Did not achieve desired weapons effects.

3.4.11. Area 51 – Target Acquisition.

3.4.11.1. **Q**. Target or offset aim point (OAP) acquired (if required) on the first attack with radar and/or TGP; if missed due to difficult target identification features, a successful reattack was accomplished. For multiple target scenarios, all targets were acquired on the first attack or with a successful reattack.

3.4.11.2. **Q-**. Late to acquire the target or OAP with radar and/or TGP, degraded the initial attack or reattack. For multiple target scenarios, 50% or more of the targets were acquired on the first attack or with a successful reattack.

3.4.11.3. **U**. Target or OAP was not acquired. For multiple target scenarios, less than 50% of the targets were acquired on the first attack or with a successful reattack. A successful reattack is defined as being within parameters to effectively employ the planned weapons against the target.

3.4.12. Area 52 – Weapons Employment. Evaluate each planned and attempted release.

3.4.12.1. **Q**. Correctly utilized the weapon system to deliver the desired ordnance (actual or simulated) and correctly analyzed any malfunctions. Executed all required procedures to successfully employ the weapon. Crosshair placement or weapon score was within AFMAN 11-2B-1V1-established reliability criteria. Achieved all weapons release parameters.

3.4.12.2. **Q-**. Minor errors in knowledge of weapons delivery procedures, attack parameters, weapons computations, or error analysis for the events performed. Minor procedural errors degraded weapons employment.

3.4.12.3. **U**. Demonstrated inadequate knowledge of weapons delivery procedures, attack parameters, weapons computations or error analysis for the events flown. Did not correctly prepare the weapon system to deliver the desired ordnance. Improper procedures during the attack resulted in unsuccessful weapons delivery. The overall grade for weapons employment will be unqualified when any of the following occur:

3.4.12.3.1. Failure to recognize an obvious malfunction or error adversely affecting delivery capability. **(T-2)**.

3.4.12.3.2. Unable to successfully accomplish a weapons release as a result of erroneous or incomplete inflight planning or mission planning. **(T-2)**.

3.4.12.3.3. Failure to achieve weapon safe escape and safe separation parameters for specific weapons planned. **(T-2)**.

3.4.12.3.4. Failure to achieve briefed track tolerances. (T-2).

3.4.12.3.5. Attempted or released weapons in contradiction with the mission directives or SPINS. If FE judges that the pilot or WSO could not successfully attack a target, the FE may also give an unqualified grade in Area 25: Airmanship. (T-2).

3.4.13. Area 53 – Range Procedures.

3.4.13.1. **Q.** Used proper procedures for entering and exiting the range. Range operations followed established procedures.

3.4.13.2. **Q-.** Minor deviations from established procedures for range entry, exit, or operations.

3.4.13.3. **U.** Major deviations from established procedures for range entry, exit, or operations.

3.4.14. Area 54 – Guided Weapon Delivery.

3.4.14.1. **Q.** Correctly released the weapon at the planned delivery parameters. Followed all current procedures and guidance during the weapon delivery. Correctly loaded options (if applicable) and statused weapons. Weapon time of flight adequate for desired weapons effects. Correct target coordinates entered.

3.4.14.2. **Q-.** Minor errors resulting in release outside the planned weapon delivery parameters degraded weapons effectiveness. Mission planning errors resulted in degraded weapon effectiveness. Slow to analyze or correct weapon errors. Minor errors in weapon delivery and recovery procedures degraded weapons effectiveness.

3.4.14.3. **U.** Improper release parameters resulted in the weapon being delivered outside weapon limits. Used improper procedures that caused the weapon to miss the target. Major errors in execution of weapon delivery procedures. Unable to load options or status weapons.

3.4.15. Area 55 – Unguided Weapon Delivery.

3.4.15.1. **Q.** Correctly released the weapon at the planned delivery parameters. Airspeed, altitude, and roll rate steady prior to release. Followed all current procedures during the weapon delivery. Correct target coordinates entered.

3.4.15.2. **Q -.** Minor errors resulting in release outside the planned weapon delivery parameters degraded weapons effectiveness. Errors in airspeed, altitude, or roll control degraded delivery accuracy. Minor errors in weapon delivery procedures degraded weapons effectiveness.

3.4.15.3. **U.** Improper release parameters resulted in the weapon being delivered outside weapon limits. Wrong target coordinates entered. Used improper procedures that caused the weapon to miss the target. Major errors in execution of weapon delivery procedures.

3.4.16. Area 56 – Dynamic Targeting.

3.4.16.1. **Q.** Effective coordination with outside agencies and contract execution within the flight resulted in prompt employment in accordance with the ROE, applicable restrictions or tactical situation.

3.4.16.2. **Q-.** Minor errors during contract execution. Slow or confusing coordination with outside agencies resulted in delayed employment in accordance with the ROE, applicable restrictions or tactical situation.

3.4.16.3. **U.** Major errors during contract execution or ineffective coordination with outside agencies resulted in employment outside the ROE, applicable restrictions or tactical situation.

3.4.17. Area 57 – TF Procedures. TF is only a test requirement and will only be evaluated by TF-qualified test evaluators. **(T-2).**

3.4.17.1. **Q.** Accomplished required procedures and checklists accurately and efficiently. Used correct clearance plane setting for the route segment flown. Coordination with the crew provided accurate terrain assessment along the flight path of the aircraft. Effectively controlled airspeed to meet mission timing and minimum Mach requirements. Proper application of fly-up procedures resulted in safe terrain separation and recovery at or above the briefed minimum safe altitude.

3.4.17.2. **Q-.** Accomplished required procedures and checklists with minor deviations that did not preclude successful accomplishment of TF or the TF fly-up. Airspeed control was unnecessarily erratic but did not exceed mission timing or minimum Mach requirements. Minor deviations in application of fly-up procedures resulted in safe terrain separation and recovery did not meet “Q” standards.

3.4.17.3. **U.** Does not meet “Q-” standards. Allowed airspeed to decay below minimum Mach during TF flight. Significant procedural errors that could cause inadequate terrain clearance during TF or TF fly-up operations. Fly-up procedures resulted in an unsafe situation. Fly-up procedures resulted in unsafe terrain separation or recovery below or not near the briefed minimum safe altitude, or over-g.

3.4.18. Area 58 – Low Altitude Visual Contour (VC) (P). VC may only be accomplished by test units and evaluated by VC-qualified test evaluators. **(T-2).**

3.4.18.1. **Q.** Accomplished required procedures and checklists accurately and efficiently. Coordination with the crew provided accurate terrain assessment and visual updates as necessary along the flight path of the aircraft. Effectively controlled airspeed to meet mission timing requirements.

3.4.18.2. **Q-.** Accomplished required procedures and checklists with some deviations that did not negate the advantages of low-altitude operations. Airspeed control was unnecessarily erratic, but did not exceed mission timing.

3.4.18.3. **U.** Not up to “Q-” standards. Except for momentary crossings over irregular terrain, deviations were in excess of ± 200 feet.

Chapter 4

EMERGENCY PROCEDURES EVALUATION CRITERIA

4.1. General Grading Standards. For malfunctions or procedures not listed in [Table 2.2](#), use Area 223:

4.1.1. **Boldface.** FE will evaluate at least one boldface per phase of flight during the integrated portion of the EPE. **(T-2).**

4.1.2. All remaining boldface procedures will be evaluated verbally or during the independent portion of the EPE. **(T-2).**

4.2. General.

4.2.1. Area 201 – Knowledge.

4.2.1.1. **Q.** Demonstrated thorough knowledge of aircraft systems, limitations, and performance characteristics.

4.2.1.2. **Q-.** Knowledge of aircraft systems, limitations, and performance characteristics sufficient to perform the mission safely. Demonstrated deficiencies either in depth of knowledge or comprehension.

4.2.1.3. **U.** Demonstrated unsatisfactory knowledge of aircraft systems, limitations, or performance characteristics.

4.2.2. Area 202 – Unusual Attitude Recoveries.

4.2.2.1. **Q.** Pilots: executed proper recovery to level flight with correct recovery procedures. WSOs: Recognized unusual attitude and accomplished correct action.

4.2.2.2. **Q-.** Pilots: slow to recognize and/or recover to level flight with minor errors. WSOs: Slow to recognize unusual attitude and/or accomplish correct action.

4.2.2.3. **U.** Pilots: unable to determine attitude. Used improper recovery procedures. WSOs: Unable to determine attitude and/or did not accomplish correct action.

4.2.3. Area 203 – Crew Coordination and Checklist Usage.

4.2.3.1. **Q.** Effectively coordinated with other crewmembers without misunderstanding. Effectively used checklist.

4.2.3.2. **Q-.** Coordinated with other crewmembers with minor exceptions. Intra-crew communications were not clear or concise. Slow to use proper checklist.

4.2.3.3. **U.** Crewmember coordination precluded mission accomplishment or jeopardized safety. Failed to follow checklist procedures or used incorrect checklist.

4.2.4. Area 204 – Airmanship (Critical).

4.2.4.1. **Q.** Executed the assigned mission in a timely, efficient manner. Conducted the flight with a sense of understanding and comprehension. Aware of performance of self and other flight members. Recognized, verbalized, and acted on unexpected events.

4.2.4.2. **U.** Decisions or lack thereof resulted in failure to accomplish the assigned mission. Demonstrated poor judgment or situational awareness to the extent safety could have been compromised. Resources were not always effectively used to the extent specific mission objectives were not achieved.

4.2.5. Area 205 – Safety (Critical).

4.2.5.1. **Q.** Was aware of and complied with all safety factors required for safe aircraft operations and conduct of the mission.

4.2.5.2. **U.** Was not aware of or did not comply with all safety factors required for safe operations or conduct of the mission. Failed to correctly accomplish boldface procedures. Operated the aircraft or equipment in a dangerous manner.

4.2.6. Area 206 – Aircrew Discipline (Critical).

4.2.6.1. **Q.** Demonstrated strict professional flight and crew discipline throughout all phases of the mission.

4.2.6.2. **U.** Failed to exhibit strict flight or crew discipline. Violated or ignored rules or regulations.

4.3. Critical Action Procedures. Areas 207-214 – Critical Action Procedures (Critical).

4.3.1. **Q.** Correct procedure applied in accordance with all applicable directives.

4.3.2. **U.** Incorrect procedure applied or correct procedure not applied.

4.4. Aircraft Malfunctions. Areas 215-223 – Aircraft Malfunctions.

4.4.1. **Q.** Immediately recognized and analyzed malfunction. Displayed correct, immediate response to emergency situations. Effectively used checklist.

4.4.2. **Q-.** Slow to recognize and or analyze malfunction. Response to certain required steps in emergency procedures was slow or confused. Used the checklist when appropriate, but slow to locate required data and implement guidance.

4.4.3. **U.** Unable to analyze problems or take corrective action. Did not use checklist and or lacked acceptable familiarity with its arrangement or contents.

4.5. Instrument Procedures. Areas 224-229 – Instrument Procedures. EPE instrument procedures follow all flight instrument procedures in accordance with [paragraph 3.3](#) with an increase in airspeed and altitude tolerances by 50%.

JOSEPH T. GUASTELLA, Jr., Lt Gen, USAF
Deputy Chief of Staff, Operations

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

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T.O. 1B-1B-1-1CL-1, *Flight Manual Supplement Checklist (Performance)*, 1 September 2006

T.O. 1B-1B-1-2CL-1, *Weapon Systems Officer's Abbreviated Flight Crew Checklist*, 1 September 2014

T.O. 1B-1B-34-2-1CL-1, *Aircrew Weapons Delivery Checklist (Nonnuclear)*, Ch 3, 1 July 2018

Adopted Forms

AF Form 8, *Certificate of Aircrew Qualification*

AF Form 847, *Recommendation for Change of Publication*

AF Form 4031, *CRM Skills Criteria Training/Evaluation*

Abbreviations and Acronyms

AC—Aircraft Commander
AFGSC—Air Force Global Strike Command
AFMAN—Air Force Manual
AFPD—Air Force Policy Directive
AFRC—Air Force Reserve Command
AFI—Air Force Instruction
AFTTP—Air Force Tactics, Techniques and Procedures
AILA—Airborne Instrument Landing Approach
AOA—Angle of Attack
AR—Air Refueling
ATP—Allied Tactical Publication
C2—Command and Control
CRM—Crew Resource Management
DAFI—Department of the Air Force Instruction
DSO—Defensive Systems Officer
EPE—Emergency Procedures Evaluation
FAA—Federal Aviation Administration
FE—Flight Examiner
FL—Flight Lead
GPS—Global Positioning System
HQ—Headquarters
IFF—Identification Friend or Foe
ILS—Instrument Landing System
IMC—Instrument Meteorological Conditions
INIT—Initial
INS—Inertial Navigation System
INSTM—Instrument
INSTR—Instructor
IP—Instructor Pilot
ISR—Intelligence, Surveillance and Reconnaissance
MAP—Missed Approach Point

MDA—Minimum Descent Altitude

MDS—Mission Design Series

MSN—Mission

NM—Nautical Mile

OAP—Offset Aim Point

OG—Operations Group

OPR—Office of Primary Responsibility

OSO—Offensive Systems Officer

P—Pilot

PAR—Precision Approach Radar

PIC—Pilot in Command

QUAL—Qualification

Q—Qualified

R—Required

ROE—Rules of Engagement

RQ—Requalification

SEAD—Suppression of Enemy Air Defenses

SML—Single-Ship Mission Lead

SPINS—Special Instructions

TAC—Tactical

TACAN—Tactical Air Navigation

TF—Terrain Following

TGP—Targeting Pod

T.O.—Technical Order

TOT—Time On Target

U—Unqualified

VC—Visual Contour

VDP—Visual Descent Point

WSO—Weapon Systems Officer

WST—Weapons System Trainer

Terms

Additional Training—Any training recommended by flight examiner to remedy deficiencies identified during an evaluation that will be completed by a specific date. This training may include ground instruction, aircrew training device, simulator or aircraft. Additional training includes a demonstration of satisfactory knowledge or proficiency to flight examiner, supervisor or instructor (as stipulated in the Additional Training description) to qualify as completed.

Certification—Procedure used to document competency in a particular task. Not interchangeable with qualification, which requires Form 8/8a documentation.

Crew Resource Management (CRM)—The effective use of all available resources; people, weapon systems, facilities, equipment, and environment by individuals or crews to safely and efficiently accomplish an assigned mission or task.

Deviation—Performing an action not in sequence with current procedures, directives, or regulations. Performing action(s) out of sequence due to unusual or extenuating circumstances is not considered a deviation. In some cases, momentary deviations may be acceptable; however, cumulative momentary deviations should be considered in determining the overall qualification level.

Emergency Procedures Evaluation (EPE)—A flight, aircrew training device, simulator or verbal evaluation used to evaluate emergency procedures and systems knowledge.

Error—Departure from standard procedures. Performing incorrect actions or recording incorrect information.

Flight Examiner—An aircrew member designated to perform evaluation duties as specified by this instruction. Flight examiners will be qualified in the events they evaluate (**Exception:** SPOT evaluations). (**T-2**). Unit Flight Examiners include squadron flight examiners assigned to the flying squadron, OGV flight examiners assigned to the OGV but attached to the flying squadron and other wing individuals tasked with flight examiner duties assigned above the squadron level. A higher headquarter flight examiner is a flight examiner assigned to a numbered air force or major command. Senior Flight Examiners are senior flying commanders – specifically, flying numbered Air Force commanders and operations group commanders (and/or, their deputies) – that act in the capacity of flight examiners.

Initial Evaluation—The first evaluation of any type for a mission design series (MDS) (e.g., INIT QUAL/INSTM, INIT MSN, INIT INSTR).

Instructor Evaluation—An evaluation that initially and reestablishes instructor qualification of the examinee in an MDS (i.e., INIT INSTR and RQ INSTR) as directed in AFI11-2MDS Vol 1.

Major—Detracted from mission accomplishment. Adversely affected use of equipment, or violated safety.

Minor—Did not detract from mission accomplishment.

Mission Evaluation—Qualifies an aircrew member to employ the member's assigned weapon system in accomplishing the unit's operational or designed operational capability statement mission. (**T-2**). Requires AF Form 8/8a documentation.

Omission—To leave out a required action or annotation.

Qualification Evaluation—Qualifies an aircrew member to perform the duties of a particular crew position in the specified aircraft. **(T-2)**. Requires AF Form 8/8a documentation. **(T-2)**.

SPOT Evaluation—An evaluation other than one used to satisfy the requirements of a periodic, initial instructor or requalification instructor evaluation. **(T-2)**. May be no-notice. Requires AF Form 8/8a documentation.